

Disturbingly-Common Poisonous Plants

As a former little girl that used to put just about any wild plant into her mouth while out in the woods, I was mortified, during my research for this article, to find out that some of my would-be summertime snacks were actually highly poisonous. Let's start with the most toxic plant in North America, the Poison Hemlock. All parts of this plant are poisonous. People have died from eating as few as 8 leaves! The worst part is most of us have probably picked it as children, mistaking it for Queen Anne's Lace (wild carrot). But unlike wild carrot, poison hemlock does not have hairs on its stems or leaves, nor does it grow branching, feathery bracts beneath its flower clusters. If you are in any doubt of its identity, bruise the plant in question. Poison Hemlock will give off a strong, unpleasant odor said to be like that of mouse urine (in case any of you have ever actually smelled mouse urine). In most cases, poisoning has occurred from people mistaking Poison Hemlock's roots for parsnips, its leaves for parsley or its seeds for anise or caraway. The difference between wild parsnip and Poison Hemlock is that parsnip has deep-yellow flowers. The Hemlock Society does not advise even picking this plant, because this "bad egg" can cause toxic reactions when inhaled and can burn your skin upon contact with the liquid inside the plant (you can absorb its chemicals through your skin). A master of disguise, Poison Hemlock also resembles Water Hemlock, which is equally poisonous. One bite of a Water Hemlock root has been enough to kill a human being as evidenced by the following story from the *Morbidity and Mortality Weekly Report* from April 08, 1994.

"On October 5, 1992, a 23-year-old man and his 39-year-old brother were foraging for wild ginseng in the mid-coastal Maine woods. The younger man collected several plants growing in a swampy area and took three bites from the root of one plant. His brother took one bite of the same root. Within 30 minutes, the younger man vomited and began to have convulsions; they walked out of the woods, and approximately 30 minutes after the younger man became ill, they were able to telephone for emergency rescue services.

Within 15 minutes of the call, emergency medical personnel arrived and found the younger man unresponsive and cyanotic with mild tachycardia, dilated pupils, and profuse salivation. Severe seizures occurred and were followed by periods of apnea. He was transported to a local emergency department. Physicians performed stomach-pumping and administered activated charcoal. His cardiac rhythm changed to ventricular fibrillation, and four resuscitative attempts were unsuccessful. He died approximately 3 hours after ingesting the root.

Although the older brother was asymptomatic when he arrived at the emergency department, he was treated with stomach-pumping and administered activated charcoal. He began to have seizures and exhibit delirium 2 hours after eating the root; he was stabilized and transferred to a tertiary-care center for observation. No additional adverse effects were reported.

The root ingested by the two brothers was identified as water hemlock."

Another interesting fact: The philosopher Socrates died in 399BC by drinking a potent solution of Poison Hemlock, which was favored by the Greeks at that time as a "humane" method of execution. And now that we can rest assured that Queen Anne's lace will never again grace the wildflower bouquets on our kitchen table, let's move on to an odd one that made the list. Let's hear it for Pennsylvania's own State Flower, the beautiful Mountain Laurel. Human beings have to eat a lot of leaves to get sick, but Delaware Aboriginal people reportedly used Laurel tea to commit suicide. In relation, all parts of Rhododendrons and Azaleas are ALSO extremely poisonous and will cause nausea, vomiting, difficulty breathing and coma. Eating a couple of leaves of any of the two can be fatal for a human adult. Even the continual consumption of honey from Rhododendron and Azalea flowers can be poisonous. This effect has been known since 400BC, when honey was a chief source of sweetness in Europe and Asia. Greek soldiers of that era were poisoned by prolonged use of Rhododendron honey. Luckily, Rhododendrons and

Azaleas contain a chemical, like turpentine, that burns the mouth, which frequently discourages potential victims from consuming dangerous quantities of the leaves.

The following trees, however, are a little more palatable to humans - or at least their fruit is. Peaches, Cherries and Apples all have toxic components. All parts of the cherry and peach trees, with the exception of the edible fruits, contain cyanide-producing compounds that are released when cherry or peach seeds, bark, and leaves are eaten. Children have died from eating the seeds, chewing on peach twigs, and making "tea" from peach leaves. Apple seeds also harbor cyanide. Accidental ingestion of a single apple seed, peach or cherry pit, therefore, though NOT recommended, is unlikely to cause any serious trouble.

And the list goes on...

Deadly Nightshade - Deadly nightshade is related to the potato. The poisonous chemicals in deadly nightshade are similar to those found in the green parts of potatoes. Fruits of deadly nightshade are brightly-colored and resemble tiny tomatoes, so they may be attractive to children. I've seen these in fields everywhere and have often been tempted to "try them out", because after all, what could be wrong with a little mini-tomato?? I won't be putting them on a hamburger any time soon. Children have been killed by eating only three of the berries, and the whole plant is considered dangerous due to its alkaloids, which affect the nervous system. Please be sure to point these deadly plants out to your kids.

Oddly, the annual garden tomato is closely related to deadly nightshade. For centuries the fruit was thought to be poisonous, and it was planted in gardens as an ornamental. Although we now know that fresh tomatoes are harmless, the foliage and vines do contain alkaloid poisons. Children have been severely poisoned from making a tea from the leaves, and livestock have died from eating the foliage and vines. Digestive upsets consist of nausea, vomiting, abdominal pains, constipation or bloody diarrhea. Nervous effects are sluggishness, abnormal flow of saliva, labored breathing, trembling, weakness, loss of feeling and paralysis. Even the breath-taking Wisteria that graces many arbors and trellises are potentially hazardous to one's health. The seeds, borne in pods, are known to be poisonous to children. The flowers are toxic, as well, and serious intoxications have resulted from chewing the bark. Two seeds are enough to cause serious danger to the health of a child.

It seems no one is safe. If you're a fiddlehead salad fan, beware. The inedible Bracken fiddleheads can be confused with the very similar-looking and edible Ostrich Fern. Acute poisoning from these ferns is unlikely. However, their effect is cumulative, and eventually produces a variety of internal cancers. In Japan, where Bracken Fern fiddleheads are traditionally consumed as food, scientists attribute the high incidence of stomach cancer to the popularity of this vegetable. On a "lighter" note, the good ol' morning glory has somewhat of a different toxin. Its seeds contain alkaloids and LSD-like compounds. During the 60's, potent brews of pulverized seeds (about 50) would produce hallucinations, nausea, convulsions and at times death. The Aztecs used morning glory to induce psychic religious visions.

Thanks to the above, I've officially hung up my "taste-test" shoes and will no longer pop a curiosity into my mouth for further lingual identification. I hope this information also prevents readers from any future toxic plant-induced stomach ache or worse. --Since there were just too many plants to include, I've created a Part 2 of my 'Disturbingly-Common Poisonous Plants' list. Feel free to request the list via e-mail.--

White Snakeroot – This is a very common species in the aster family that I see almost every time I am in the woods. Cows concentrate a toxic substance in their milk if they graze on this plant. Abraham Lincoln's mother is said to have died from White Snakeroot poison in the milk she drank.

Horse Chestnut - It is reported that flowers are poisonous to honey bees; poisoning of humans eating honey produced from the nectar of California buckeye has been reported. In Europe, ingestion of the seeds has reportedly killed children, and leaves and dried fruits have caused loss of cattle.

Yew Bush – These common, low-branching shrubs are evergreens whose compact, hardy form makes them popular for urban landscaping. The seeds and leaves of yew bushes are poisonous. The pulp of the scarlet, berry-like fruit is harmless, but the seeds inside can be FATAL. Male and female shrubs are distinct; fruit is found only on female plants. The foliage is more toxic than berries. There are poison records of accidental consumption of fruit by children who are attracted by the "pretty, red berries." The poison is highly toxic; in some cases, death occurs suddenly without any prior symptoms at all. If you have Yew in the neighborhood, it is important to prevent small children picking & eating the fruit.

Oleander - Using branches of oleander to cook food is enough to cause poisoning. Oleander contains over 50 toxic compounds! It's even dangerous to burn oleander clippings and prunings because the poison is carried in the smoke.

Lily-of-the-Valley - A couple of years ago Random House recalled all copies of a big new cake cookbook because one frosting recipe called for a garnish made of Lily-of-the-Valley flowers. Any part of that beautiful and fragrant plant can be poisonous if eaten in sufficient amounts

Pokeweed - Although the young shoots of this 4 to 5 foot tall plant are eaten in the early spring (as "poke salad"), the older plant and especially its roots are deadly poisonous.

Black Locust - The seeds, bark, and leaves contain toxic proteins that have caused sickness and death in cattle, horses, poultry, sheep, and humans. The plant should be considered toxic to all animals if ingested. Children were poisoned (with rare reports of fatalities) after chewing on plant material, especially the bark.

Caladium (also known as Elephant's Ear) – These common ornamental shade plants contain Oxalate crystals. If eaten, the leaves may cause burning, swelling, and choking. In larger doses, however, Oxalate causes severe digestive upset, breathing difficulties and- if enough is consumed- convulsions, coma and death. Recovery from severe oxalate poisoning is possible, but permanent liver and kidney damage may have occurred. Jack-in-the-Pulpit causes the same above reactions.

In the case of Buttercups and Clematis, the strong acrid taste usually deters further consumption, so fatalities are rare. But the poisons in Monkshood, Delphinium, Marsh Marigold, Baneberry and Larkspur, however, are much more potent, so ingestion of even small quantities is dangerous. The alkaloids in these causes burning of the mouth and throat, confusion, dizziness, headaches and vomiting. In severe poisoning, breathing difficulty, then paralysis, are followed by convulsions and death from asphyxiation and circulatory failure. However, most victims do recover within 24 hours.

Castor Beans - Seeds, bark & leaves are all somewhat toxic, but the greatest concentration of the toxin occurs in the seeds & their pods, where Ricin is found. Ricin is infamously portrayed in movies and TV shows (most recently the show *24*), since it's as nasty a poison anything you can imagine. If you grow Castor Beans in your garden, it is safest to remove & destroy the seed pods before they mature. One or two Castor Bean seeds are near the lethal dose for adults. Aside from their use in lubricants, soaps & varnishes, Castor Beans are often seen in jewelry from the Caribbean; children are sometimes poisoned by sucking or eating beads made from the beans. Ricin causes diarrhea so severe that victims can die of shock, as a result of massive fluid & electrolyte loss.

Iris, Hyacinth, Tulips and Hydrangea – Like peach pits, the twigs and leaves of these plants contain cyanide. Narcissus and Daffodils rarely cause fatalities, but also contain toxic alkaloids that may cause dizziness, abdominal pain & upset, and occasionally convulsions. During the Second World War, starving Dutch cattle- and sometimes starving Hollanders- ate tulip bulbs with sickening & occasionally fatal results.

Foxgloves -They are the pharmaceutical source of the heart drug, Digitalis, which is poisonous in overdose. The plants are also helpful in preserving other species of cut flowers with which they may be arranged in a vase, or in stimulating the growth & endurance of garden root vegetables, especially potatoes, with which they may be planted. Sap, flowers, seeds, and leaves of Foxgloves are toxic, but the greatest concentration of the toxin occurs in the leaves, even dried ones. Adults are occasionally poisoned by the misuse of herbal preparations. Another possible cause of poisoning is misidentification. The leaves of Foxgloves are easily mistaken for those of Comfrey, which are traditionally brewed for tea; both share the same general form and a coarsely hairy surface. Foxglove leaves, however, have finely toothed edges, whereas Comfrey leaves are smooth.

Elderberry – All parts of the Elderberry, especially the roots are toxic. Children have been poisoned by using pieces of the pithy stems for blowguns (eek!). Nausea and digestive upset are common.

Mistletoe - Both children and adults have died from eating the berries

Rhubarb –Large amounts of Rhubarb leaves, raw or cooked, can cause convulsions, coma, followed rapidly by death.

Sassafras – Sassafras contains safrole, a volatile oil, which ingested in large concentrations causes liver tumors. Consequently, it is no longer used to flavor root beer.

MayApple – The roots have at least 16 active toxic principles. Children often eat the apple with no ill effects, but several apples may cause diarrhea. Only the ripe fruits are non-poisonous. All other parts are too dangerous to use. The American Indians sometimes used the roots and shoots to commit suicide.

Sweet Pea – Unlike most peas, the seeds of the sweet pea are poisonous as they contain a neurotoxin and should not be eaten.